

What is claimed is:

1. A method for coating inorganic particles with a metal compound comprising the steps of:
 - 5 preparing a dispersion which comprises a metal salt and inorganic particles in a molten organic material which takes a solid form at 25°C, is converted into a polar liquid by heating, and decomposes by further heating;
 - 10 and
 - heating the dispersion, whereby coating the inorganic particles with a metal compound which is converted from the metal salt.
- 15 2. The method of claim 1, wherein the organic material is urea or carbonyldiurea.
- 20 3. The method of claim 1, wherein the metal salt is selected from the group consisting of metal nitrates, metal sulfates, and metal acetates.
- 25 4. The method of claim 1, wherein the inorganic particles have a mean particle size in the range of 10 nm to 100 μ m.
- 30 5. The method of claim 1, wherein the inorganic particles comprise an inorganic phosphor or an activated inorganic phosphor.
- 35 6. The method of claim 1, wherein the inorganic particles comprises a dielectric material or an electroconductive material.
7. The method of claim 1, wherein the metal compound is a phosphor or an activated phosphor.

8. The method of claim 1, wherein the inorganic particles comprises an inorganic dielectric material or an inorganic dielectric material and the metal compound is a phosphor or an activated phosphor.

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9. The method of claim 1, wherein the inorganic particles comprise an dielectric material and are coated with a phosphor or an activated phosphor and the metal compound is a dielectric material.

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10. The method of claim 1, wherein the metal compound is selected from the group consisting of metal oxides, metal nitrides, metal oxynitrides, metal sulfides, and metal oxysulfides.

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11. The method of claim 1, wherein the dispersion contains a dopant.

12. The method of claim 1, wherein the heating of the second step is performed at a temperature of 150 to 450°C.

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13. The method of claim 1, wherein the heating of the second step is performed at a temperature of 150 to 1,500°C.

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14. The method of claim 1, wherein the heating of the second step is continued until the organic material decomposes.

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15. The method of claim 1, wherein the heating of the second step is continued until the organic material decomposes and further continued to a temperature of 700 to 1,500°C.

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16. Coated inorganic particles prepared by the method of claim 1.

17. A method for coating inorganic particles with a metal compound comprising the steps of:

preparing a first mixture which comprises a metal salt and an organic material which takes a solid form at 25°C, is converted into a polar liquid by heating, and decomposes by further heating;

heating the first mixture to produce a precursor of the metal compound dispersed in a denatured organic material, the precursor being converted from the metal salt;

preparing a second mixture of the inorganic particles and the precursor dispersed in the denatured organic material;

and

heating the second mixture, whereby coating the inorganic particles with a metal compound which is converted from the precursor.

18. The method of claim 17, wherein the organic material is urea or carbonyldiurea.

19. The method of claim 17, wherein the metal salt is selected from the group consisting of metal nitrates, metal sulfates, and metal acetates.

20. The method of claim 17, wherein the inorganic particles have a mean particle size in the range of 10 nm to 100 μ m.

21. The method of claim 17, wherein the inorganic particles comprise an inorganic phosphor or an activated inorganic phosphor.

22. The method of claim 17, wherein the inorganic particles comprises a dielectric material or an electroconductive material.

5 23. The method of claim 17, wherein the metal compound is a phosphor or an activated phosphor.

10 24. The method of claim 17, wherein the inorganic particles comprises an inorganic dielectric material, and the metal compound is a phosphor or an activated phosphor.

15 25. The method of claim 17, wherein the inorganic particles comprise an dielectric material and are coated with a phosphor or an activated phosphor and the metal compound is a dielectric material.

20 26. The method of claim 17, wherein the metal compound is selected from the group consisting of metal oxides, metal nitrides, metal oxynitrides, metal sulfides, and metal oxysulfides.

25 27. The method of claim 17, wherein the first mixture contains a dopant.

28. The method of claim 17, wherein a dopant is incorporated into the second mixture.

30 29. The method of claim 17, wherein the heating of the second step is performed at a temperature of 150 to 450°C.

35 30. The method of claim 17, wherein the heating of the fourth step is performed at a temperature of 150 to 1,500°C.

31. The method of claim 17, wherein the heating of the fourth step is continued until the polymerized urea decomposes.

5 32. The method of claim 16, wherein the heating of the second step is continued until the polymerized urea decomposes and further continued to a temperature of 700 to 1,500°C.

10 33. Coated inorganic particles prepared by the method of claim 17.